

# Recombinant Human FAK/PTK2 protein

Catalog No.: RP03174LQ **Recombinant**

## Sequence Information

Species	Gene ID	Swiss Prot
Human	5747	Q05397-1

### Tags

N-Flag

### Synonyms

FAK; FADK; FAK1; FRNK; FADK 1; PPP1R71; p125FAK; pp125FAK

## Product Information

Source	Purification
Baculovirus-Insect Cells	> 75% by SDS-PAGE.

### Endotoxin

Please contact us for more information.

### Formulation

Supplied as a 0.22 µm filtered solution in 25 mM HEPES-NaOH pH 7.5, 300 mM NaCl, 10% glycerol, 0.04% Triton X-100, 0.5 mM TCEP.

### Reconstitution

## Background

FAK (Focal Adhesion Kinase 1), also known as PTK2 (Protein Tyrosine Kinase 2), is a non-receptor protein-tyrosine kinase that plays an essential role in regulating cell migration, adhesion, spreading, reorganization of the actin cytoskeleton, formation and disassembly of focal adhesions and cell protrusions, cell cycle progression, cell proliferation and apoptosis. It is required for early embryonic development and placenta development, embryonic angiogenesis, normal cardiomyocyte migration and proliferation and normal heart development. FAK regulates axon growth and neuronal cell migration, axon branching and synapse formation, and it is required for normal development of the nervous system. It also plays a role in osteogenesis and differentiation of osteoblasts. FAK can function in integrin signal transduction, but also in signaling downstream of numerous growth factor receptors, G-protein coupled receptors (GPCR), EPHA2, netrin receptors and LDL receptors. It can form multisubunit signaling complexes with SRC and SRC family members upon activation; this leads to the phosphorylation of additional tyrosine residues, creating binding sites for scaffold proteins, effectors and substrates. FAK also can regulate numerous signaling pathways, promote activation of phosphatidylinositol 3-kinase and the AKT1 signaling cascade, MAPK1/ERK2, MAPK3/ERK1 and the MAP kinase signaling cascade. It can recruit the ubiquitin ligase MDM2 to P53/TP53 in the nucleus, and thereby regulates P53/TP53 activity, P53/TP53 ubiquitination and proteasomal degradation.

## Basic Information

### Description

Recombinant Human FAK/PTK2 Protein is produced by Baculovirus-Insect Cells expression system. The target protein is expressed with sequence (Ala2-His1052) of Human FAK/PTK2 (Accession #NP\_722560.1) fused with a Flag tag at the N-terminus.

### Bio-Activity

### Storage

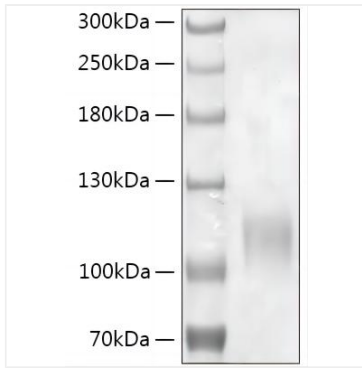
This product is stable at  $\leq -70^{\circ}\text{C}$  for up to 6 months from the date of receipt. For optimal storage, aliquot into smaller quantities after centrifugation and store at recommended temperature. Avoid repeated freeze-thaw cycles. Avoid repeated freeze/thaw cycles.

## Contact

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## Validation Data

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Recombinant Human FAK/PTK2 Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 120 kDa.